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THE
PHYSIOLOGICAL ARGUMENT
IN
OBSTETRIC STUDIES AND PRACTICE.

BY
A. F. A. KING, A.M., M.D.,
Washington, D. C.

Being the Presidential Address delivered before the Washington
Obstetrical and Gynæcological Society at the Annual Meeting,
October 7th, 1887.



[Reprinted from the AMERICAN JOURNAL OF OBSTETRICS AND DISEASES
OF WOMEN AND CHILDREN, Vol. XXI., April, 1888.]

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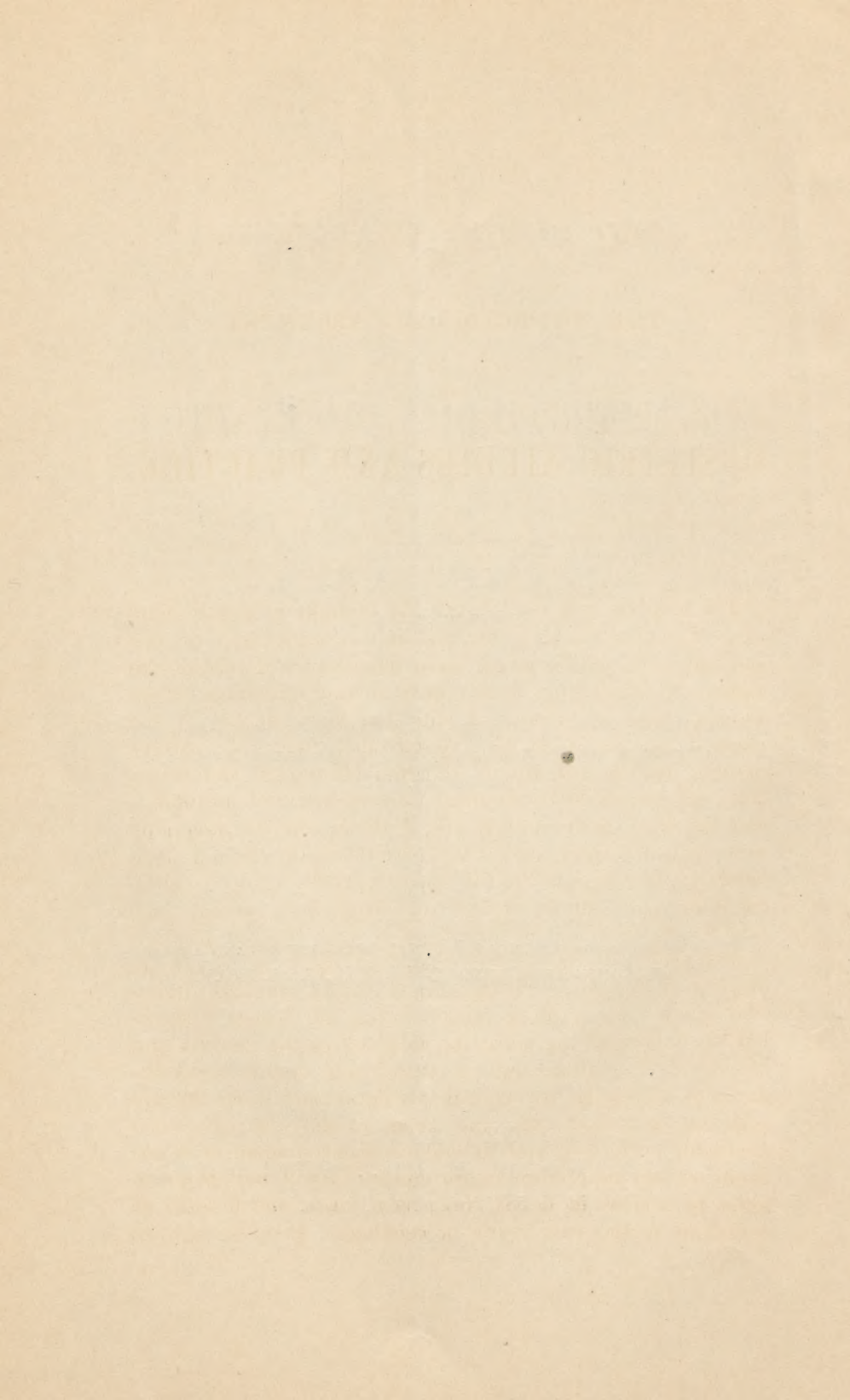
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THE revolution of the seasons has brought us to the beginning of another working year, and, in conformity with the law and custom of this Society, I have the pleasure of reading the address which belongs to my duty as your presiding officer. Before, however, proceeding with the main subject of the paper, I am glad to be able to state that, during the twelve months just elapsed, the Washington Obstetrical and Gynecological Society has maintained its existence and usefulness, and the work accomplished will, I think, compare favorably with that of former years. With a numerically limited membership, and certainly limited opportunity for extensive clinical observation—drawn almost exclusively from private practice, for we have not the advantages of large lying-in hospitals—with these restraining circumstances, I think we may, without fear of converting our organization into a “mutual admiration society,” congratulate ourselves that the Society’s contributions to current literature, its additions to the general sum of clinical observations, and its attempts to extend the boundaries of knowledge by original speculation and discovery, are sufficient to indicate that the duties of the year have been creditably performed, and to lend every encouragement to our future efforts and future improvement. I will not linger to-night to review, in detail, the papers, cases, and discussions contained in the past year’s proceedings. It is enough to

know that we are progressing; that our meetings have at all times been pleasant; our discussions void of anything like personal rancor; and that our gathering together has served to create a closer intimacy and to promote a kindlier personal feeling between the members composing our organization. I cannot recall any very great regrets to lament; we have, happily, no deaths to mourn, and the resignations have been few. Of the latter, the resignation of our secretary, Dr. H. M. Cutts, of both his office and membership (handed in to-night) is somewhat acutely painful—as are all recent wounds—but I am sure the pleasant recollections of his faithful performance of official duty, and the good wishes that follow him to his new home in Massachusetts, will be sufficient anesthetics for the pain he inflicts in leaving us. I feel certain the members of the Society will join me in some recognition of the valued service of, and in returning our thanks to, the Committees on Admissions, Business, Publication, and Microscopy, and their respective chairmen, for faithful attention to their several duties, which has contributed more than a little to the prosperity and success of our Society. Nor must we omit to remember, I am sure with grateful appreciation of his labors, the fidelity and care of the gentleman who has shouldered the responsibility of managing our finances. As my relations with them and their relations with the members of our organization have been always pleasant, I can only hope their good offices will be continued, and thus facilitate the duties of my successor in the presidential chair.

In casting about for some subject of general interest and general application, suitable for an annual address, I have determined to offer a few suggestions on what may called

THE PHYSIOLOGICAL ARGUMENT IN OBSTETRIC STUDIES AND
PRACTICE.

In the obstetric literature of the present age, as indeed in that of all past ages, so far as our records present it, we continually find the master-students of obstetric science—the leaders of our art—and not only them, but also the less scientific local practitioner, in his thoughtful application of remedies—we continually find them making use of some such expressions as these: The birth of a child is a physiological

process and therefore requires, in natural cases, no assistance. Expulsion of the after-birth is a physiological process, and therefore requires, in natural cases, no assistance. The lower animals—the dumb beasts—bring forth their young without artificial aid, why should not the nobler organism of a human female do the same? These, and such like thoughts as these, not only find a place in scientific discussions, but also exert a tremendous influence in determining methods of practice. In fact, it may almost be said that, with many practitioners, their valuing or not valuing this physiological argument will go far towards determining whether they will or will not use antiseptics; whether they will or will not use placental expression; whether they will or will not apply the abdominal binder, support the perineum, administer medicines, or expedite delivery by forceps, and so of a host of other methods, the use or non-use of which may be questionable. Evidently, then, it becomes of the utmost importance that the legitimate place, the true value and bearing of this so-called physiological argument should, if possible, be defined. If it be fallacious, let us eliminate it altogether. If it be of partial value only, we should seek to understand with what qualifications it can be admitted. Far be it from me, in this brief address, to assume the settlement of these important questions in any very definite way. This would require a long discussion and perhaps a longer head than mine. I may, however, contribute a thought or two upon the subject that may be profitable. It may here be premised that what I have to say will tend, rather than otherwise, to show that this physiological argument *is* fallacious, or, if not really fallacious, that its applicability is much more limited than is generally supposed.

We all agree that the main source of progress in obstetric science, as in other departments of medicine, grows out of our studying and understanding Nature. Every abnormal phenomenon observed, can only be called abnormal when it is found to differ materially from what is normal. This implies the definition and recognition of a normal standard or unit of comparison, and further, that which is perfectly normal or natural cannot be improved by art. It therefore *appears*, and *is*, quite rational and logical for the obstetrician to act upon the statement that “*natural* labor needs no assistance.” But will he be good enough to *define* his “natural labor”? And,

having defined it, will he further state, how often it is met with among the women of highly civilized communities. If the "natural labor" cannot be defined, and cannot be encountered if it could be defined, where shall we discover a proper place for the practical application of this physiological argument? Now, I think, the truth is, that a perfectly natural labor—which implies a natural woman in all respects normal with regard to age, strength, formation, occupation, dress, and other hygienic surroundings, one whose gestation and sexual relations have been normal, whose surroundings at the time of delivery and during her lying-in are in all respects normal; one whose natural instincts have been in no way perverted or misdirected by education, or the instruction of other persons, and thus we might add many other ingredients in the definition. I say, the truth is, a perfectly natural labor, among civilized communities, is a decidedly *rara avis*, so seldom met with in practice that the application for the physiological argument is extremely limited. The obstetric work, assuming to define the management of a really natural labor, should begin somewhat in the same way as did the author of a work on the culinary art while discussing the method of cooking a hare: "first, catch your hare!"

I beg to maintain that, in the present age, and among civilized communities, a case of perfectly natural labor must be, in great part, a *hypothetical case*; or rather, it must be a case made up, so to speak, of fragments of normality, some taken from one woman, and some from others, which, when properly put together, reproduce the ideal type of a perfect specimen now almost extinct; just as the archeologist puts together the fossil bones of an extinct animal, and, adding to them what his knowledge teaches him is missing, at last reproduces some ancestral form that has long ceased to exist. When we consider the numerous influences and disturbing factors which social customs impose upon the female, with regard to the whole process of reproduction, we cannot be surprised to find perfectly natural cases extremely rare. And as such disturbing causes are more frequently present than absent, it cannot by any means be just to judge of normality simply by frequency of occurrence, as is usually done.

To present only a few of the disturbing influences referred

to, and which occur so commonly as to be almost universal, let me mention :

1st. The continuance of *coitus* after conception and during the greater part of pregnancy—a proceeding entirely outside the bounds of physiology, the parallel of which cannot be found in the whole animal kingdom, and which is an outgrowth purely of sociological evolution.

2d. The artificial appendages of dress, and, in particular, of corsets. In the supple abdominal wall where Nature has wisely placed no ribs at all, custom has added ribs of brass, and woman grapples them to her spine with hooks of steel.

3d. Almost every lying-in woman is subjected to a digital examination per vaginam, an operation frequently repeated by the physician, or physicians, and perhaps by the nurse. Is this a natural proceeding? Can its parallel be found among the animals?

4th. From exhaustion following labor, or for prudential reasons growing out of the necessities of the case, a woman remains "nine days" on the bed where she has been delivered. Do the animals wallow for nine days on the same spot where *they* have been delivered? Emphatically not, even though that spot be the cool antiseptic earth, a far less dangerous couch than the soiled clothing and super-heated appendages of a modern feather bed or mattress, and which last may not have entirely escaped from the absorption of blood, urine, lochia, and liquor amnii.

5th. From the necessity of recumbency for some days following delivery, drainage from the uterus and vagina, by gravitation, is interfered with in the civilized woman. On the contrary, the uncivilized woman, as well as the animals, after natural labor are able to rise and walk, and thus promote drainage by gravitation.

6th. With the animals, and with barbaric women, and with some of the poorer women of civilized communities, the necessary struggle for existence, the labor required to obtain food and the means of living, are sufficient to develop a strong nervous system and powerful muscles, by which the work of parturient labor is easily accomplished; while, on the contrary, the pampered daughter of fortune, whose food is purchased with inherited gold, whose muscles languish and wither in idle inactivity, and the powers of whose spinal cord are soon exhausted,

drifts into tedious labor and requires the aid of forceps to accomplish delivery. These two classes of cases cannot both be included in "natural labor." And yet nothing may be wrong with the reproductive apparatus: it is the nervo-muscular system that is in fault.

8th. With the civilized woman, when the child is born, *it is immediately taken away from her* and cared for by another, the nurse or physician. The barbaric woman, on the contrary, is able to rise and take care of the child herself, and so do the animals. I have thought it not improbable that this apparently trifling difference may have a very material influence in creating the necessity for artificial aid in placental delivery. We have learned by experience that pressure upon and kneading of the uterus and the application of the child to the breast, secure uterine contraction and promote expulsion of the after-birth. But there is every reason to believe that what we have learned to do artificially on this point would be done by Nature in a purely physiological state. Imagine, for example, what would be the conduct of a human female—a primipara if you please—totally uninstructed and quite ignorant of her maternal duties. We may even go so far as to suppose (for, as I have said, in these modern days such cases must be hypothetical) that she is even ignorant of her pregnancy, not understanding nor caring to understand the cause of her abdominal enlargement, and perhaps mistakes her pains for a bad attack of colic or illness. But there soon comes the moment of ease and of joy, and she hears the infant's cry. Can it be otherwise than that maternal instinct and affection and curiosity will at once prompt her to sit up, take the child in her hands, and attempt to fold it in her arms upon her bosom, when it will immediately suck the nipple. But the placenta is yet undelivered (or may be so); it may be still in the uterus, but more likely in the vagina, or more likely still in the os uteri, projecting partly into the vagina, and requiring only a few moderate uterine and abdominal contractions to expel it entirely. And these contractions will be produced by reflex irritation of the nipple while the child sucks, or, if the length of the umbilical cord be not sufficient to permit the child to reach the breast, it (the child) may at least be placed upon the lower part of the abdomen where, by its weight (eight or ten pounds) and the never-ceasing squirming of its feet and knees, the fundus uteri will receive

both the pressure and the kneading necessary to invoke uterine contraction and placental expulsion, a result still further promoted by the pressure of the woman's abdominal viscera upon the fundus uteri, as she leans forward to get the child to her breast, and also by the action of her abdominal muscles and diaphragm, which she is able to exert (and does exert by an involuntary straining effort) with far more efficacy than she could possibly do if lying stretched out upon her back. It is not impossible that the vibration of a crying child's voice upon the abdomen, coupled with the emotions it produces in the mother, may contribute to promote contraction of the womb.

Now, if these hypothetical views be correct—and they are not *entirely* hypothetical either, for pressure and kneading of the uterus *will* stimulate uterine contraction whether applied by means of a child or by the hand of an assistant—if these views be correct, it is evident that in the most “natural labor,” as we in modern times understand that term, *the very means which Nature has provided and designed to promote placental expulsion are, in the civilized female, taken away from her, and hence the necessity of some artificial substitute* which is supplied, and rightly supplied, by the hand of the accoucheur. Under these circumstances then, how very crude, thoughtless, and illogical will it be to argue that in “natural labor” artificial aid in delivering the placenta is unnecessary.

In such of the domestic animals as I have watched during parturition, the new-born young proceed at once to the nipples, by which, I presume, reflex uterine contractions are excited to expel the secundines; while in human obstetrics, the child is seldom put to the breast until some time after the placenta has been delivered by artificial aid.

9th. Experience has taught the modern obstetrician that certain dangers are avoided, and a degree of comfort secured to the lying-in woman, by the application of an abdominal binder after delivery. Nothing of this sort is needed for safety and comfort in the lower animals, nor, I suppose, among barbaric women. Hence the inference, not infrequently drawn, that in “natural labor” among civilized women this artificial appendage is unnecessary or harmful. But those who reach this inference forget that the posture of our civilized women, after delivery, is recumbent instead of erect, a posture tending to relax the abdominal muscles, and thus leave the uterus with-

out its normal support. They forget also that the muscles of the abdominal wall themselves are frequently atrophied from disuse, and perhaps deformed and enfeebled by the previous cramping and compression of corsets, belts, and skirt strings, which may have exercised their baneful influence continuously for years prior to conception.

In the thin, idle, sedentary "girl of the period," we should no more expect to find a strong muscular abdominal wall than we would expect to find the muscles of a Western woodchopper in the arms of those abominable imitations of humanity of the male sex which we term city "dudes." The binder, then, is an artificial appendage, but it mends a defect that has been artificially produced.

10th. Those who accord the physiological argument more than its full value are disposed to ignore in a "natural labor" the several methods devised for preventing laceration of the perineum. But they forget or fail to recognize that even in these "natural labors" the perineal structures are quite often unnaturally thin, rigid, and perhaps poorly developed or partially atrophied, like the abdominal muscles. And they forget also, what I here desire in particular to accentuate, that at least one of the means which nature has provided to facilitate the transit of the head through the vaginal canal and vaginal outlet, viz.: the *luxurious layer of lubricating mucus*, has been repeatedly disturbed, broken up, and withdrawn by the examining fingers of the obstetrician. I cannot here enter into the etiology of perineal rupture, but I think the ingredient of *lubrication* has not received the attention which it deserves. If one should attempt to force an artificially constructed globular body through a tight-fitting, pliant, elastic tube, in one instance *with*, and in another *without* lubrication, the facility and difficulty of the operation, in the two cases, respectively, would be strikingly manifest. So, in labor, especially when it is rather long in duration, and the layer of lubricating mucus has been disturbed, and its reproduction prevented by irritation and congestion of the parts, due to prolonged pressure; when, too, the presenting head, instead of slipping along, sticks to the vaginal wall and pushes a wave of membrane before it; and when also the sphinctorial orifice and muscles of the pelvic floor are irritated into spasmodic contraction instead of passively yielding as they ought to do—

under these circumstances we find a combination or succession of artificially produced interferences, which often challenge and defy, even in a so-called "natural labor," all the artificial aids and devices of the obstetrician to prevent rupture of the perineum.

Finally, natural labor in woman is often compared, as I have said, with parturition in the dumb animals, and the inference is drawn that one ought not to need assistance more than the other. Here we cannot fail at once to remark that woman is not a *dumb* animal. Irrelevant, and perhaps trifling, as this remark may at first sight appear, the difference between being dumb and not being dumb, when seriously considered, becomes, as I will next endeavor to show, a distinction of no trifling magnitude. On the contrary, it constitutes a most important element in explaining the subversion and artificial deviation of the reproductive instincts from their natural course. The human race is composed of speaking animals. And as I have thus far so frequently referred to the differences between civilized and uncivilized women, let it here be noted that the growth and development of our civilization largely depend upon language. Words rule the world: "the pen is mightier than the sword." Without words we could, of course, have no laws or legislation, no history, no creeds or religions, no education, no literature, no progressive sciences, for the accrued knowledge of one generation could not be bequeathed to the next. In fact, language constitutes the basis of all civilizations. And while all the functions and instincts of the human body are affected more or less, directly or indirectly, by the influence of language, in none does this influence exert a more directly potent power than upon the reproductive function, especially in the gentler sex. And it needs but little reflection to demonstrate that this influence is quite frequently in an abnormal or unphysiological direction; and by which natural instincts are subverted and restrained, and this alike during maidenhood, pregnancy, labor, and lying-in. In fact, the whole process of reproduction is governed less by natural instinct than by what women are told, persuaded, educated, and instructed to do by the medium of language. It is, perhaps, by *words*, either heard or read in the suggestive dramas, poems, and fictions of current literature that emotions are kindled which bring—often enough prematurely—the first congestive blush to the ovarian

and generative organs of the young girl—and this, long before such ideas would have arisen spontaneously. It is *words* that have taught her what she knows or what she conceives to be right and natural with relation to the time, manner, frequency, etc., of coition after marriage. It is by *words* that she has learned, and perhaps been persuaded to practice, the methods of preventing conception. It is by *words* that she has been taught, and perhaps persuaded to practice or have practised upon her, the methods of inducing abortion. It is by *words* that she is told to do this, that, and the other, or not to do this, that, and the other, during her *pregnancy*. It is by *words* that she is instructed to refrain from this or refrain from that, or persuaded, against her natural inclinations, to do this or that, during her *labor*. It is by *words* that she is instructed or commanded to do, or not do, certain things during her *lying-in after delivery*. It is the *words* of some horror-kindling tale, told by a foolish nurse, that, during labor, shock the nervous system and stop or impede uterine contraction; and it is the encouraging *word* of the physician by which this terror is dispelled and labor resumes its course. In truth, like snowflakes in a winter's air, the whole atmosphere of a civilized woman's life is thick with the uttered follies, fashions, and faiths; the trifling superstitions, theories, and errors; the conflicting instructions and contradictory counsels of good books and bad, of nurses, neighbors, parents, and physicians; and these all come to her, influence her conduct, and determine the management of every stage in each reproductive act, simply from the circumstance that she is *not a dumb animal*. Let it even be noted that the advice of one physician differs from that of another; the obstetrical practice of one section or country is different from that of another; and the recognized, orthodox management of labor hardly remains the same for a single decade. All these changes are fostered, propagated, and made possible chiefly or only through the medium of language. Thus, while the functions of the reproductive system in civilized woman are swayed to and fro by every wind of doctrine, conveyed to her on the vehicle of words, the silent natural instincts, which ought to be her guides, and which are deeply ingrained into her reproductive constitution by prehistoric ages of ancestral transmission, are well-nigh subjugated and annulled by the instruction and education that comes from her

being a speaking animal; and the much sought phenomenon of an ideal natural labor, in these modern days, lies, like the solid earth, concealed by snow, buried beneath the accumulated drift of artificial customs, contradictory counsels, and ephemeral theories. On the contrary, language cannot vary, and words are impotent to exercise even the slightest change in reproduction and parturition among the dumb-beasts; hence, I think, how futile and useless is the argument that parturition in the one should need no more assistance than in the other.

Furthermore, apart from the *direct* effect of verbal utterances heard or read by the woman herself, language acts upon her *indirectly* through the instrumentality of education received by others. Even the orthodox practice of scientific obstetrics—often enough one thing this year, and another next—grows out of the statements of text-books, the utterances of lecturers, the education of students by preceptors, the instruction of nurses and midwives, the dispersion of ideas by journals, the discussions of organized societies—these, and, not impossibly, the words of an annual address, may exert an influence tending to modify the process of reproduction in women that are yet unborn. In fact, counting both the direct and indirect effects of language, it would seem that the reproductive system has been peculiarly victimized, if I may so express it. So far from being permitted to follow and obey the instincts naturally designed to govern it, the reproductive function—of which the act of generation constitutes a part—is in a great degree controlled or directed by the canons of churches, by social customs, and by legal enactments. Witness, for example, the rite of circumcision and other religious mutilations of the genitals; the ceremonies of marriage; the laws with regard to sexual intercourse, adultery, polygamy, monogamy, etc., to say nothing of those unnatural uses and vices of the sexual system which arise, not so much from instinct as from the “*evil communications*” that “corrupt good manners.” In all ages, these laws, customs, and vices have constituted a part of the history of *speaking* peoples. So is it with relation to the management of pregnancy, labor, and the puerperal state, and so has it been in all ages from the remotest bounds of history until the present day, from the edict of Pharaoh to the Egyptian midwives down to the latest obstetric aphorism emanating from the medical magnates of a Vienna hospital. And thus, again, I repeat:

Do what she will, civilized woman of the present day cannot escape the deleterious agency of fashions, customs, laws, rites, methods, and practices, that are propagated, transmitted, and perpetuated through the instrumentality of language: she is *not a dumb animal*.

Gentlemen, time and the limit of your patience warn me that I must bring this discussion to its close. And yet, the story of the differences between civilized woman and the animals, with regard to reproduction, is scarcely half told. Very much more might be said on my side of this question. But I will only add one more statement, viz., the almost total neutralization and annihilation of the *natural influence of season* upon human reproduction. With the animals, especially with wild species, untrammelled by domestication or artificial breeding, the influence of season upon reproduction is sufficiently manifest; and it is fair to infer that prehistoric woman was also influenced in a similar manner, of which we even yet find some remaining evidence in the well-known greater frequency of conception during the spring months, and the consequent more common occurrence of labor during the winter, the months in which delivery most often occurs being December and January.

Now of the factors that, in consequence of season, directly influence reproduction in a state of nature, I suppose the more potent are temperature and diet.

A moment's consideration will show how civilization has diminished the seasonal variation in these two factors. By artificial heat, the temperature of our dwellings is well-nigh as high in winter as in summer; and our improved means of commerce and rapid transit supply our tables with the products of all seasons, and nearly of all climates, during the entire year; at least this is true to a certain extent. With prehistoric woman, in a state of nature, however, things must have been very different. Then winter was cold, summer hot, and the temperature of dwellings followed more nearly that of the external air. So, too, each season supplied its own special kinds of food, and these, it may be presumed, must have indirectly effected certain changes in the blood of the woman during the various stages of the reproductive function, thus modifying the nutritive pabulum supplied to the fetus, and also, after delivery, modifying the milk upon which the child subsisted; and producing also other changes in the blood, probably con-

ducive to safety during delivery and lying-in. In prehistoric times, the food of man during the early spring months probably consisted, for the most part, of animal food of a highly nutritious and easily digestible composition, viz., the eggs of birds or wild fowls; of fish, swarming into the rivers at this season of their inland migration; and possibly of clams, oysters, and other forms of mollusks, now made attainable by the breaking-up of the winter's ice. Now it is exactly these kinds of food which even at the present day are said, and no doubt with at least some truth, to stimulate and fortify the generative functions. They are the foods provided by Nature for the season of human copulation and conception. A little later on, when pregnancy may be supposed to have occurred, we find the provident earth yielding fresh succulent vegetable leaves—leeks, lettuce, garlic, onions, etc., together with the early fruits, such as cherries, and a little later the greenest and sourest of green and yet unripe apples—the very articles of food for which so many women, even at the present day, exhibit a special longing during the early months of pregnancy.

Then follows the summer with its abundance of fruits and vegetables of endless variety, and the easy capture of young birds and animals. And later still, the autumn furnishes a yet more plentiful abundance of more substantial game in the various wild animals and birds which, together with the different grains, seeds, and nuts, on which they themselves fatten, are stored up for winter use by men and women. And in the very depth and middle of this winter comes Nature's period for human parturition. And here it may well be asked, other things being equal, whether this cold season be not a far more favorable one for delivery than any other. Is not the winter air more pure and free from septic germs? Does not an environment of cold air during labor conduce to more secure uterine contraction and safety from post-partal bleeding than the prostrating air of summer? The English wives of the English army and government officers in India are said to be exceedingly liable to post-partal hemorrhage on account of the prostration occasioned by the extreme heat of the climate to which they are unaccustomed. And is not the whole process and suffering of labor more tolerable and less exhausting during winter than summer? Note too, that a cold season, with proper protection of the skin from exposure, is far more

desirable for young infants than the high temperature of summer; and during lactation the constituents of a mother's milk, provided she subsist on foods resembling the winter's diet of prehistoric woman, will certainly be very *different* from that of a civilized woman of the present day, whose *menu* comprises the products of all seasons, not excepting perhaps even tropical fruits. Perhaps it will be said that this ability to obtain all kinds of food at all seasons is conducive to perfect nutrition, and, in a general way, has led to the improvement of the human species. This may be quite true. I will not deny it. All I am striving to suggest is, that the natural relation or adaptation between the seasons and the different stages of human reproduction, which undoubtedly existed in prehistoric times, has in these modern days been neutralized and broken up; in other words, as I have said, the influence of season has been almost annihilated, whether for good or evil, deserves further study, for I have here only handled the subject very superficially. When, however, we recall the long, long wilderness of time, during which our prehistoric mothers were continuously impressed with, and subjected to these seasonal influences, it need not surprise us if there still remain and crop out occasionally—perhaps in the bold relief of atavic reversion—a very decided echo of these ancestral impressions and their correlative transmitted peculiarities. And to illustrate how the consideration of such matters as these can be of practical use in our studies of natural labor, I will simply mention one item, viz.: If it be natural, proper, desirable, and conducive to the well-being of mother and child for delivery to take place in *mid-winter*, it can scarcely be logical to say the same of delivery when it occurs in *mid-summer*. In our studies of natural labor, therefore—in our comparison of labor in civilized women with that of animals and barbaric women—in fact, in utilizing what I have called “the physiological argument in obstetric studies and practice,” I think it is necessary that the varying influence of season, on the two sides of the comparison, should be taken into consideration. Labor, indeed, ought to be studied, not only anatomically and physiologically, but also climatologically, anthropologically, ethnologically, and sociologically.

Lastly, to crystallize some definite statements out of these somewhat rambling remarks, I think we may conclude:

1st. That among civilized women, especially those occupying the higher planes of the social scale, ideal natural labor and natural reproduction are rare.

2d. The causes of this rarity will be found in the unnatural habits, customs, occupations, etc., of civilized life, and in the subversion of natural instincts, growing out of education, etc., through the medium of language, as previously explained.

3d. Labor, as we find it, not being purely natural, will, unlike labor in the animals, require, and continue to require, artificial aid—and therefore the argument that, in natural labor, assistance is not needed, while intrinsically true, is futile, out of place, and inapplicable in the great majority of our obstetric cases.

We are all aware that a good deal has been written of late years with regard to the decline of the capacity of civilized woman for easy and repeated propagation. It seems that the reproductive organs have in some way undergone a sort of abasement or degeneration. And while such an admission is at once ungallant, distasteful, and humiliating, I do not see how we can escape it. If it be not true, how then shall we account for the small number of children borne by many women, and for the absolute sterility of many others? If it be not true, how shall we explain the ever-growing mounds of gold, and the ever more and more elaborate palaces, built from the professional profits of the gynecological specialists of our cities? If it be not true, why this continuous caravan of pilgrims wending their way to the Mecca of a Woman's Hospital, devoutly requesting that they may be spayed—begging that the changes natural only to the decline of life may be produced in the prime and bloom of womanhood; and that the joys, pleasures, and blessings of maternity may be at one blow permanently abolished and forever rendered impossible? Are these the evidences of a normal and undegenerated condition of the reproductive organs, organs the exercise of whose natural function is normally prompted by impulses so imperious, in order to insure perpetuation of the species, that it is second only to the first great law of self-preservation which secures the life of the individual? No, I think we cannot escape the admission that civilized woman *has* undergone some degeneration as regards her capacity for propagation. And, if it be asked, Why this has occurred, I think the answer is simply this, viz.: that the varied and combined in-

18 KING : *Physiological Argument in Obstetric Studies.*

fluences of a highly developed civilization have, in one way or another, caused the reproductive organs to offend against Nature's holy laws. These organs have left undone the things that they ought to have done, and they have done the things that they ought not to have done, and, consequently, there is no health in them.

